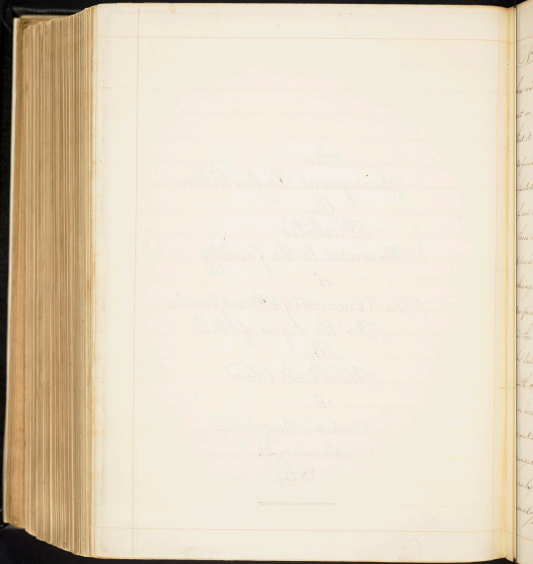


Ano  
Inaugural Dissertation  
On  
Diabetes  
Presented to the faculty  
of  
(The University of Pennsylvania  
For the degree of M.D.  
By  
Albert R. Ober  
of  
Coshen: Maryland.  
January 21.  
1829.

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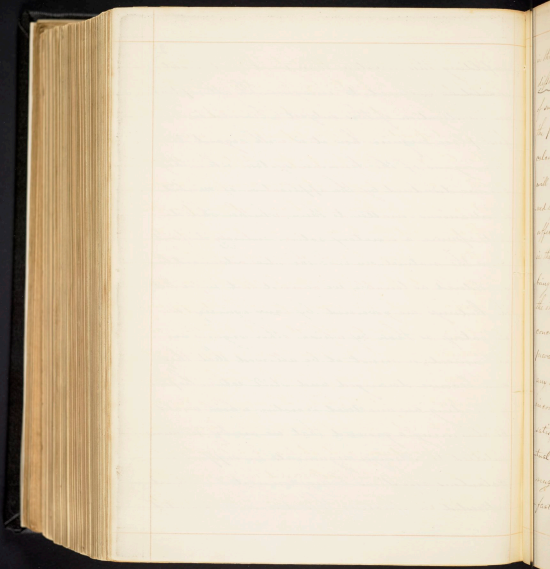


Notwithstanding our acquaintance with this disease  
has within a few years been considerably extended,  
yet we must unquestionably be led to acknowledge  
that it is exceedingly difficult to assign a correct  
definition for the term diabetes. Prof Cullen it is  
opined that this disease consists merely in the passing  
of an unusually large quantity of urine, whilst oth-  
ers it is maintained apparently with equal  
plausibility that the urine itself undergoes considerable  
change. There is in my opinion no question of the  
propriety of including both views of the subject  
in the strict definition of the term. It is believed  
by Cullen that this disease is sometimes connected  
with calculous affections of the kidneys, and that  
an irritation applied to them may increase the  
secretion of urine, but finally concludes that the  
singular change produced in the urine is not so  
easily explained. If we be permitted to argue from  
analogy, I think, fewer obstacles will occur in





unfolding this mystery than what first sight  
 should be inclined to imagine. On attempting  
 an investigation of this subject I would in the  
 first place enquire how it is with regard to  
 the organs of the human system when they  
 become disordered by the application of morbid  
 & extraneous matter to them; whether they do  
 not assume a secretory action entirely different  
 from the natural one? If the idea advanced be  
 considered as tenable we cannot but infer that  
 the kidneys are governed by laws equally as  
 obligatory as those by which other organs are  
 influenced; & must it be allowed that they  
 can become deranged and still retain the power  
 of affording an unaltered secretion which would  
 be claiming a ground that we are by no means  
 entitled to. Stronger arguments in support of  
 Calculous affections being connected with, and  
 interested in effecting this disease are afforded



in the well-known facts that after having  
dissolved the calculi by the administration  
 of suitable medicines and having prevented  
 the predisposition to the deposition of urinary  
 calculi by the use of a proper diet, the disease  
 will in very many instances cease. It is belie-  
 ved by some authors who have written upon this  
 affection that the liver is somewhat concerned  
 in the formation of it in consequence of the bile  
 being altered from its natural appearance; on  
 the other hand this reasoning will not appear  
 conclusive when we reflect that diabetes has  
 prevailed without the liver having experienced  
 any change whatever, a truth which has been  
 incontrovertibly established. We may therefore be  
 satisfied that the notion of bile being effec-  
 tual in producing diabetes is altogether  
 nugatory, hypothetical and in no way satis-  
 factory. The division of this disease into



by writers is into Diabetes insipidus and mellitus. Ensuring in the opinion expressed by some Authors that it should in its most proper sense be confined to the latter species I shall therefore limit my remarks to the consideration of it alone. Of this disease the Ancients have furnished us no record in their writings, which would lead us to believe they possessed any very distinct or correct notions of its pathology, causes or manner of treatment. It was not until the year 1684 that we obtained any regular account of it. At this period the celebrated Willis appeared and dispipated the cloud which had previously obscured it. By Colles the idea was entertained that the proximate cause depended on some fault in the assimilating power, but from this I should beg leave to differ and contend that the remote cause rather depended

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upon a deprivation of those powers. The reason  
is very obvious and intelligible, that it is requisite  
that matter should be applied directly to an  
organ in order to effect so immediate and  
wonderful a revolution. The causes, which give  
rise to this affection are ingesta of various  
kinds especially those articles that are hard  
and irritating. Medicines of a stimulating  
character are also very productive of it. It  
is stated that the phenomenon of diabetes can  
only be explained upon the principle of the  
retrograde motion of some of the branches  
of the absorbent system. It would seem that  
all the branches of the absorbent system have  
a certain sympathy with each other. The  
kind of sympathy which exists between them  
most probably depends on habit. These are  
the views of Darwin as mentioned in his  
Zoonomia. This retrograde motion of the

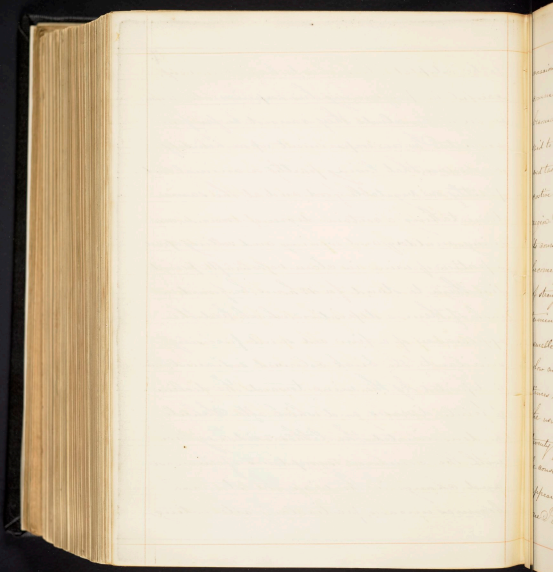




absorbents causes an immense quantity of urine to be poured into the bladder. These deductions do not appear as satisfactory as some, which have been previously drawn. From experiments made by a. S. Phillips Wilson with a view to determine the circumstances, which give a predisposition to urinary gravel it would appear that the quantity of the deposition depended in a great measure on the kind and quality of the food consumed. If this be true it will no doubt have a powerful influence in demonstrating to us the most efficient plan to be pursued in the treatment of this hitherto obstinate disease. That this opinion is not entirely without some shadow of support we have not only his own experiments to convince us, but cases which have been cured by relying on the means that these experiments have suggested as the most proper

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to be adopted. He seems to have been very  
careful in performing his experiments, therefore  
we may conclude they cannot be far from  
accurate. On one experiment upon himself,  
he observes, that living partly on animal and  
partly on vegetable food and at the same  
time taking a certain degree of exercise, mor-  
ning, midday and evening and setting apart  
a portion of urine in clean vessels, after permit-  
ting them to stand for 48 hours, he found in  
each of them a deposition, which had the  
appearance of a fine red sand precisely  
similar to the brick coloured sediment, which  
is deposited by the urine towards the decline  
of febrile diseases and which after Scheele  
he denominated the lithic acid. Together  
with the common symptoms of increase  
and change in the urine, the stomach  
becomes uneasy, particularly after eating



voracious appetite, which is one of the most  
 common symptoms, the mucus in the mouth  
 becomes thick and tenacious, the mouth is  
 said to be sometimes dry, tongue foul, depre-  
 ssed taste, dry husky skin, the bowels are also  
 costive pain and heaviness in the lumbar  
 region. If the disease be allowed to continue  
 its course, all the symptoms enumerated,  
 become aggravated and are followed by loss  
 of strength and emaciation. The disease not  
 terminating suddenly, hectic fever and in-  
 curable dropsy ensue. The pulse is usually  
 slow and feeble, though febrile, urine is some-  
 times excessive varying in quantity from  
 the usual discharge, even to thirty pints in  
 twenty four hours. This disease may almost  
 be considered as hereditary as some families  
 appear peculiarly predisposed to it. With  
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it occurred successively in several of the individuals.  
 The diagnosis with the above symptoms is not at all difficult, but should there any  
 case arise in which there prevailed the slightest  
 doubt as to the real nature of it, the point can  
 very readily be determined by analysing the  
 urine. The prognosis cannot quite so easily be  
 formed. The disease for the most part presents  
 itself in a very obstinate manner and generally  
 in those, who are possessed of shattered and  
 depraved constitutions. We may however pro-  
 nounce with considerable certainty of success  
 when there is a diminution of thirst and desire  
 for food, which are most characteristic symp-  
 toms, when the urine flows in quantity, the  
 bowels becoming more relaxed, an alteration  
 in the condition of the skin and when there  
 is an augmentation of corporeal strength  
 and energy. When symptoms the opposite





of what have been mentioned seem consequently  
 we have but a faint prospect of effecting a perfect  
 cure, although perhaps we may greatly relieve  
 the sufferings of our patients. The appearances  
 on post mortem examinations are exceedingly  
 various. Sometimes the Spleen, Pancreas and  
 Liver are found in a deranged state but in the  
 majority of instances the kidneys will be found  
 to have suffered the most complete disorganiza-  
 tion. They are sometimes inordinately flaccid  
 and enlarged at others extremely vascular and  
 inflamed and of an ash colour. The bladder  
 is occasionally thickened and diminished in  
 volume. The chyliferous vessels above named  
 are not always implicated, but the liver and  
 kidneys generally experience the greatest  
 disorder. The Pathology of diabetes is as yet  
 very uncertain. The arguments in favour of  
 the gastric origin of this affection appear to

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possess more weight than those, which are advo-  
 ced on the opposite side. In my part I can see  
 no inconsistency in locating this complaint  
 primarily in the stomach, and that the kidneys  
 are indirectly affected. And further in note  
 that I may not seem to contradict an idea  
 already brought forward, I will maintain as  
 my candid opinion, that the stomach may  
 be entirely prevented from increasing the disease  
 and that after the kidneys have become more  
 involved the disease may continue its progress  
 wholly independent of any influence which  
 the stomach had previously exerted over it.  
 The phenomena of diabetes are certainly  
 very curious, but is it more astonishing that  
 the kidneys should excrete saccharine mat-  
 ter than they should excrete urea, and there is no  
 doubt that they take on this morbid action  
 in both cases from previous disorder of the

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digestive organs. These notions with regard to its being of gastric origin I deem to be not altogether without some claims to notice and certainly derive much confirmation from the result of the treatment, which to be most successful must be directed to the digestive apparatus. Previous to the appearance of the celebrated Pills the most expedient plan to be pursued in the treatment of this affection was unknown to practitioners. It was the discovery, which was made by him, that in a wonderful degree tended to banish that empiricism which had so long existed. If it be admitted that the digestive organs are primarily concerned in the formation of this disease of course (as in all other affections) we should commence at the source and endeavour to correct their depraved condition. With this view of the subject it will be most proper in the first place to warm

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the prima via and for this purpose an infusion of *Spiceolantha* is considered as the best article that can be used. Should there exist much ichthex and mucous mild purgatives may be resorted to as Rhubarb, Magnesia &c. & should the mucous surface be much diseased the use of the blue pill holds out the greatest prospect of success. After having cleared the alimentary canal sufficiently by the administration of cathartics, we should then lay them aside only using them now and then in order to keep the bowels in a stable state. The Tonics and Astringents may next be exhibited with great propriety. Of these a vast variety have been employed such as Bark, Steel, & Myrrh, Kino, Lactone, and especially the chalybeate preparations and of the latter ~~species~~ the carbonate of iron appears to have attracted the greatest share of attention. Very recently the Phosphate of iron





has been most strenuously recommended by Boldon. He  
 considered it to be an almost infallible remedy. The treatment  
 begins with small doses as 3 or 4 grs gradually augmenting it  
 to three or four times a day. Owen thinks he has derived con-  
 siderable benefit from the use of quin <sup>or even</sup> china why a too nervous  
 irritation is a remarkably common accompaniment in this  
 disease, and as it is advisable to allay this, the antispasmodics  
 are generally resorted to. The most effectual article of that  
 class is unquestionably, opium. At this period the skin is  
 usually dry and hard and for the purpose of producing  
 moisture and relaxing the surface, nothing more suitable  
 can be adopted than the employment of the warm bath  
 together with frictions. The various diaphnetics are also  
 proper and the article most generally preferred is that  
 of Dover powder. Notwithstanding we may have delicate  
 and shallest constitutions to deal with, we should  
 not lose sight of the immense advantage, which in  
 all hands is allowed to accrue from the abstraction  
 of blood. It was employed in the beginning of the last

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contingency. Bloodletting should not be sparingly used according to some authors. If much local pain should be present, topical bleeding by cups and leeches may be beneficially employed, after which a blister may be applied over the lumbar region and continued for a considerable length of time. Little will all our remedies effect unless the strictest attention be paid to a proper regimen. My Preceptor informed me he had accomplished perfect cures in several members of the same family by confining the patients to the use of an animal diet and not allowing them even a particle of vegetable food. The propriety of this course was suggested to him as reading the experiments of A. Wilson Phillips, an account of which is affixed in his invaluable treatise on febrile diseases. As a consequence of frequent relapses in this complaint we should particularly injure our patients to be extremely careful to avoid all those things, which are regarded as exciting causes. —

